Title (en)

VECTOR PROCESSING APPARATUS

Publication

EP 0368587 A3 19930120 (EN)

Application

EP 89311461 A 19891106

Priority

JP 28099788 A 19881107

Abstract (en)

[origin: EP0368587A2] A vector processing apparatus for carrying out vector data processing including fetching vector data from a main storage (43, 44), carrying out vector calculations, and storing vector data in the main storage (43, 44), concurrently in a plurality of vector processing units (41, 42). Each of the vector processing units (41, 42) carries out vector data processing for a portion of elements among all elements of vector data, where all elements are ordered, and the vector data processing is carried out in the order of the elements. Each of the vector processing units (41, 42) contains: an address generator (45, 55) and a priority controller (46, 56). The address generator (45, 55) in each vector processing unit concurrently generates addresses for accesses to the main storage (43, 44) for elements which are concurrently requested by the above plurality of vector processing units (41, 42). The priority controller (46, 56) determines one or more accesses as allowable, among the accesses which are concurrently requested by the plurality of vector processing units (41, 42), based on the addresses concurrently generated in the address generator (45, 55), and the above order of the elements, and then outputs one or more signals for the accesses which are requested by its own vector processing unit, and are determined as allowable, to the main storage (43, 44). Further, when an indirect addressing mode is instructed, address data for the indirect addressing for the above portion of elements is read out from the main storage (43, 44) by each vector processing unit, and is temporarily held in a vector register (49, 59) in each vector processing unit, and the address data held in the vector register (49, 59) in each vector processing unit, is supplied to the address generators (45, 55) in all of the vector processing units (41, 42, Fig. 4).

IPC 1-7

G06F 15/80

IPC 8 full level

G06F 17/16 (2006.01); **G06F 15/80** (2006.01)

CPC (source: EP)

G06F 15/8092 (2013.01)

Citation (search report)

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Designated contracting state (EPC)

DE FR GB

DOCDB simple family (publication)

EP 0368587 A2 19900516; **EP 0368587 A3 19930120**; **EP 0368587 B1 19960508**; CA 2002104 A1 19900507; CA 2002104 C 19950124; DE 68926430 D1 19960613; DE 68926430 T2 19961114; JP H02127768 A 19900516; JP H0769896 B2 19950731

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